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Systems Thinking as a Design Process

Elizabeth Lockwood

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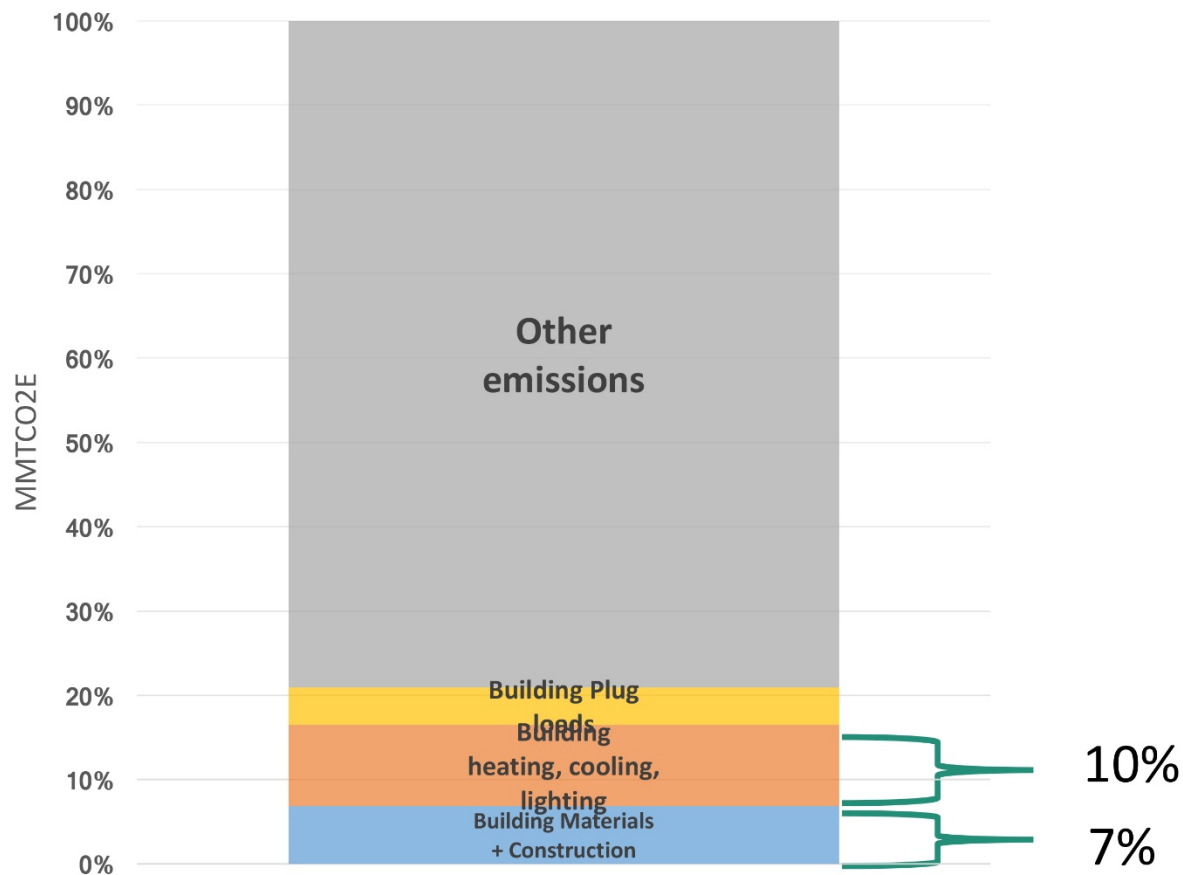
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Systems Thinking as a Design Process

Elizabeth Lockwood
LEED AP ID+C, NCIDQ, IIDA, IDEC

Oregon greenhouse gas emissions, 2015



Design Problem



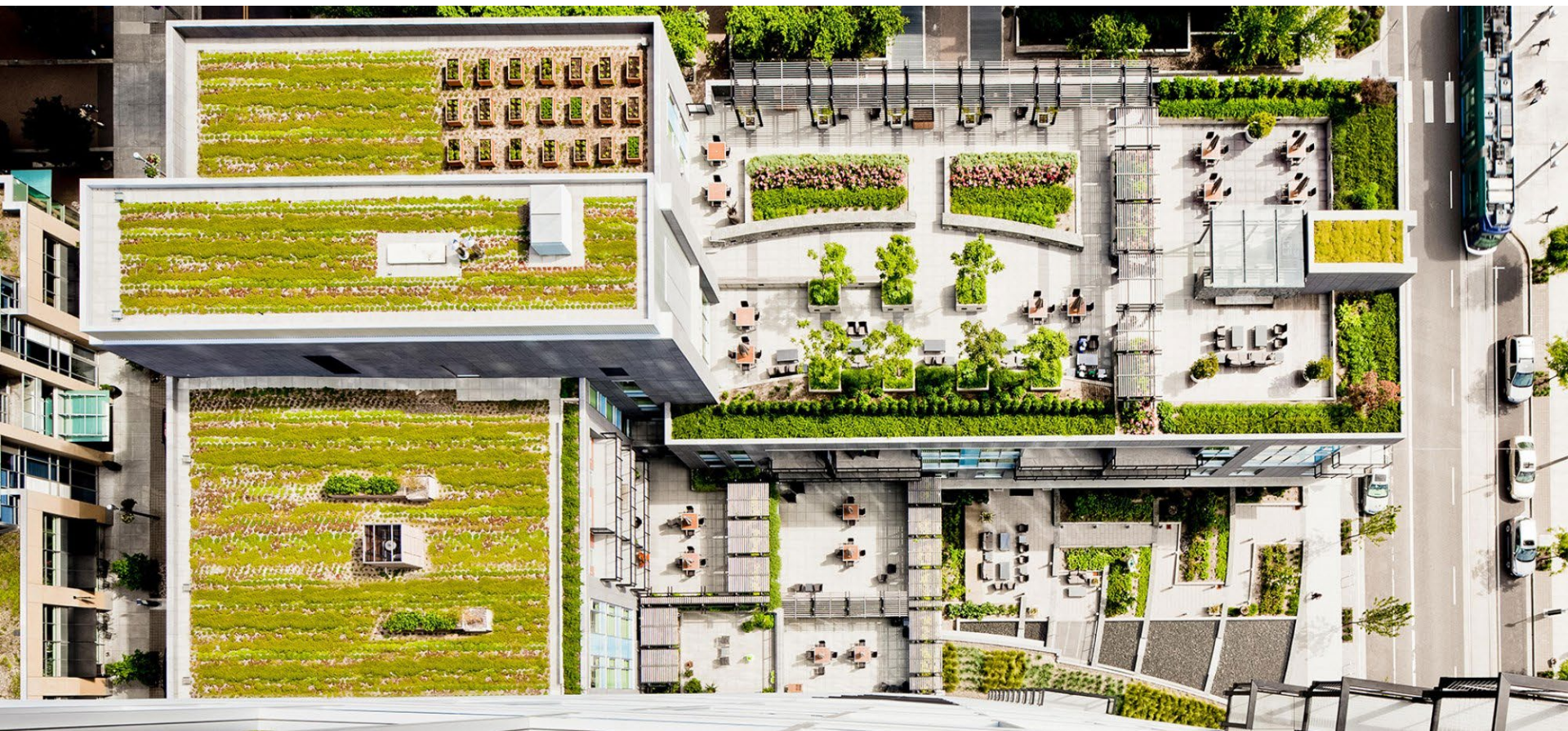
GB Programs

Technical Solutions



Parametrix

South Waterfront History



Ankrom Moisan Architects

LEED Platinum Project

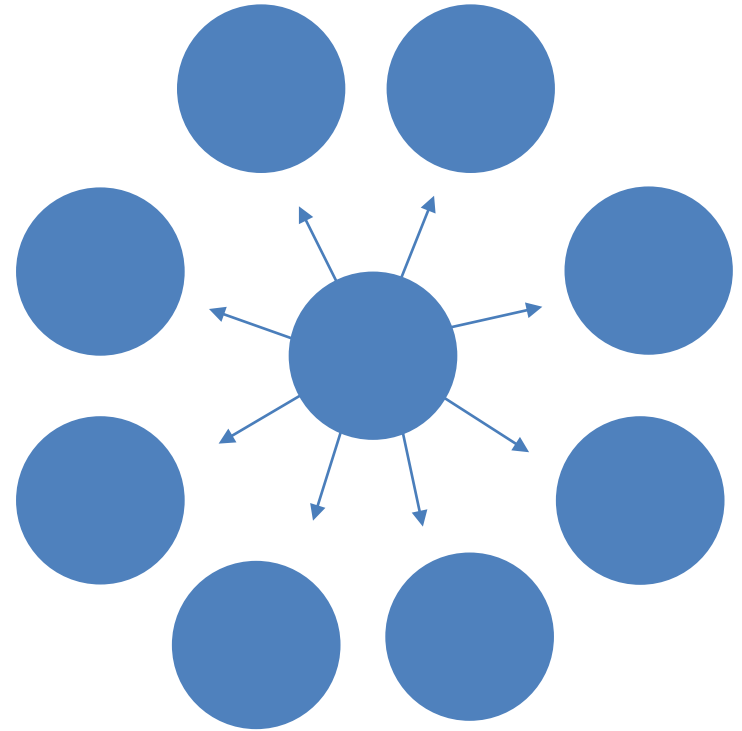


GBD Architects

Tipping Point



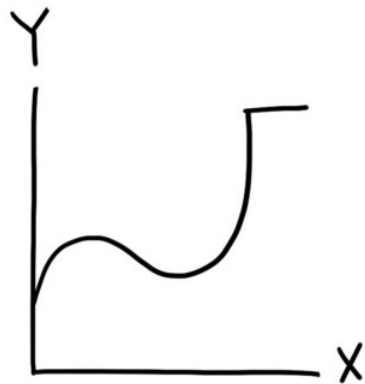
Linear Thinking



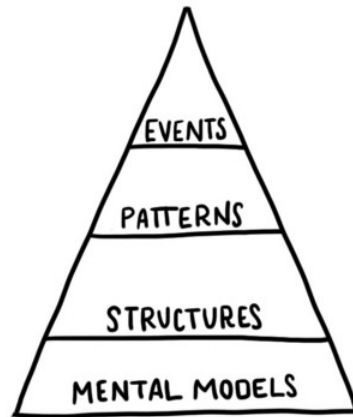
Systematic Thinking

Systems Thinking

TYPES OF SYSTEM MAPPING



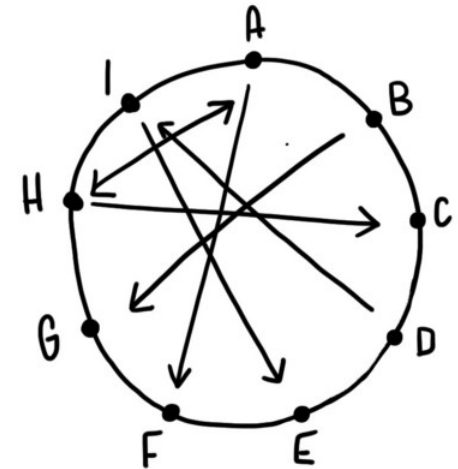
BEHAVIOUR OVER
TIME GRAPHS



ICEBERG
MODEL



CAUSAL LOOP
DIAGRAMS



CONNECTED
CIRCLES

1. Mapping Out The Parts

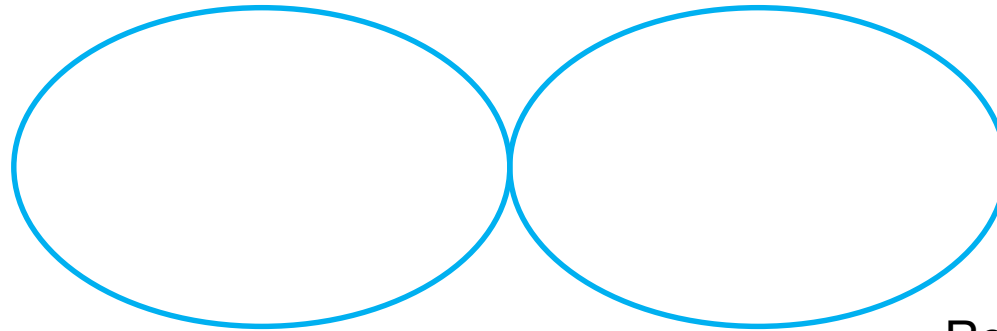
“Resiliency is the ability of a system to absorb disturbance and still remain its basic function and structure.”

– Margaret Wheatley in Walk out Walk on

2. Evaluate – Resiliency Model

Rapid Growth

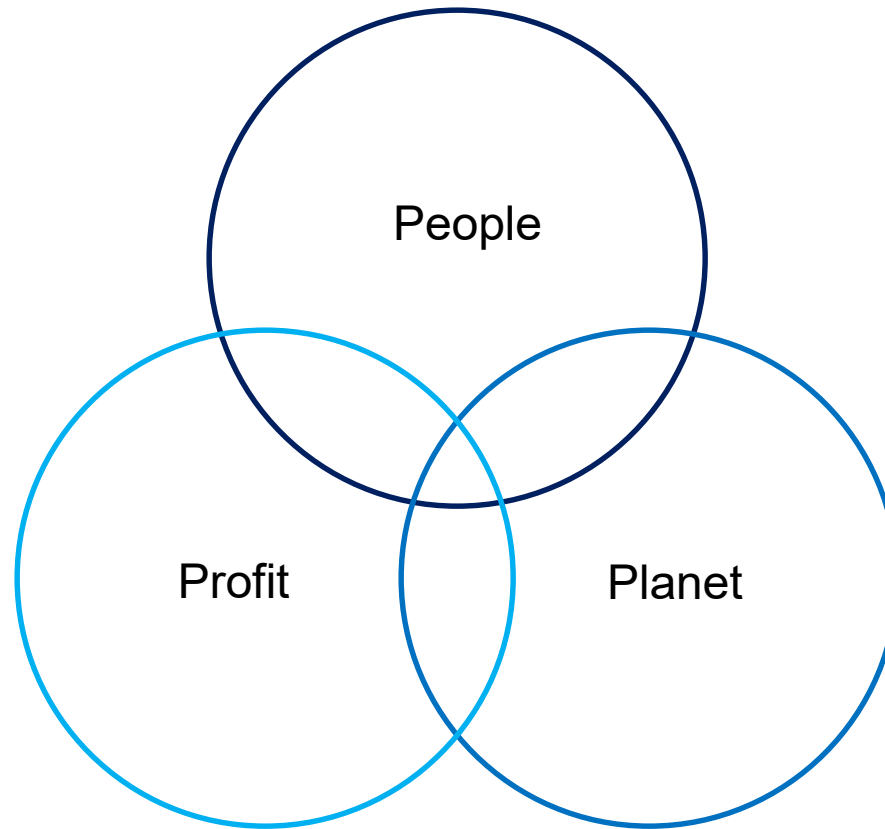
Release



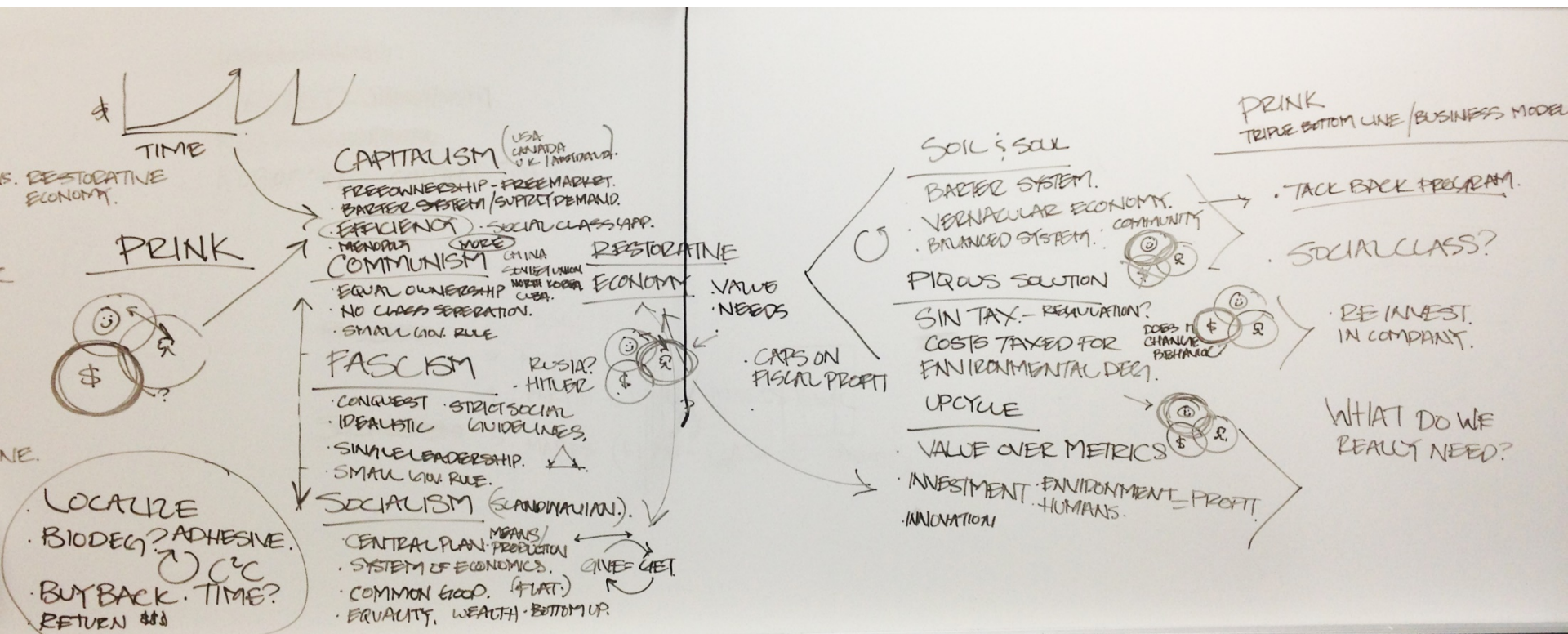
Conservation

Reorganize

2. Evaluate Using Resiliency Model



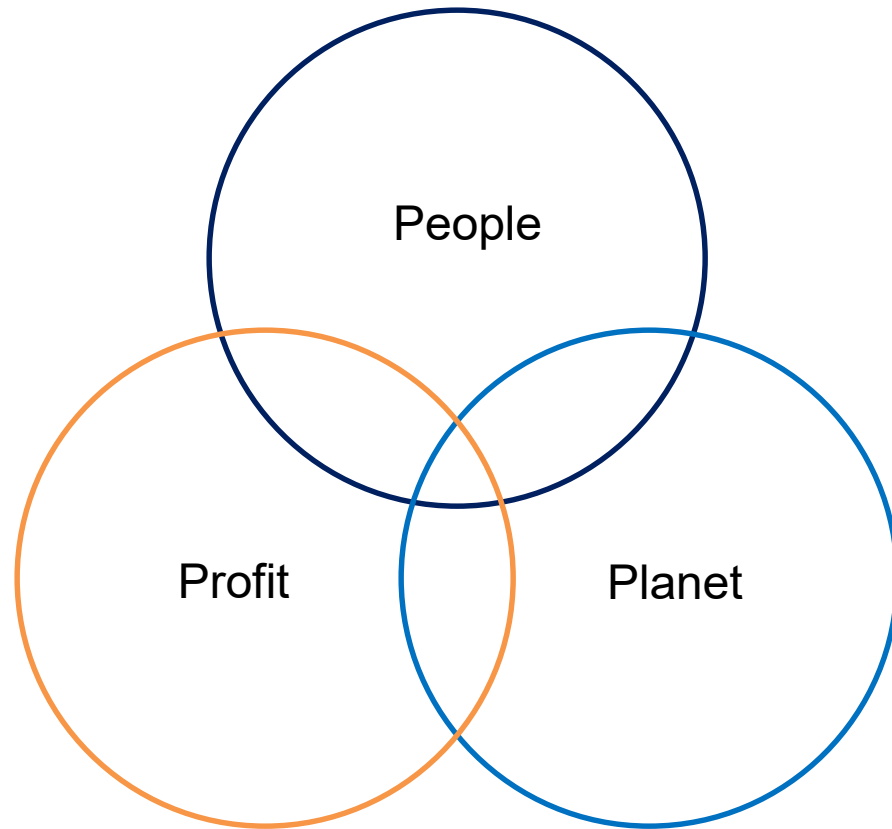
2. Evaluate Using Triple Bottom Line



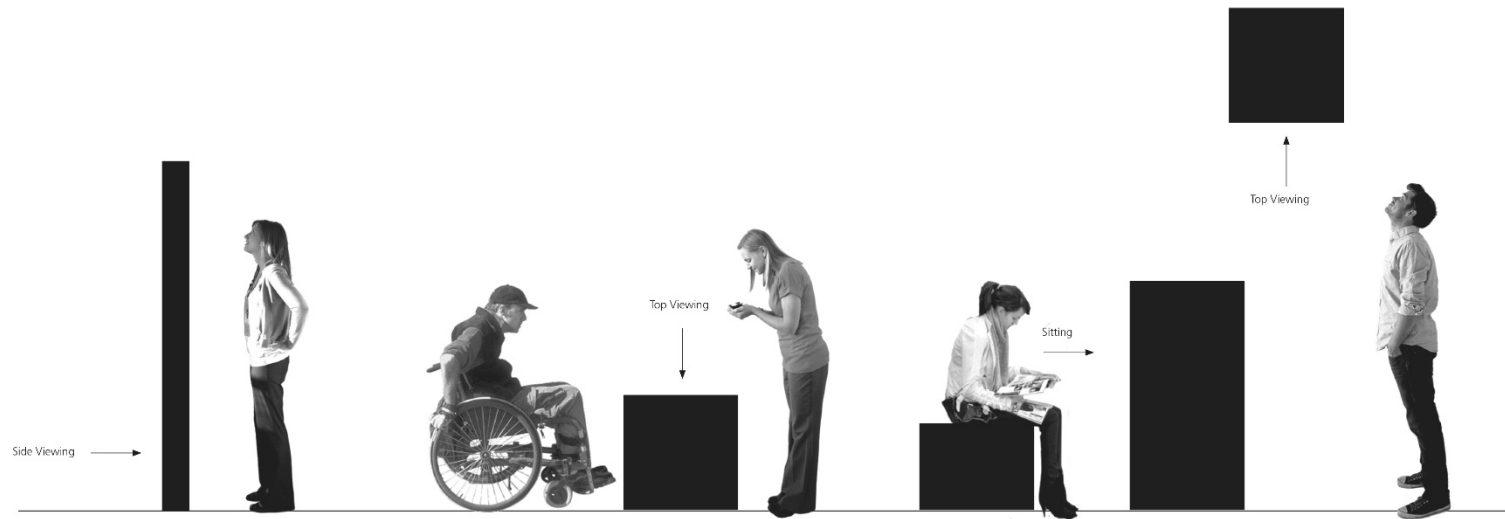
3. Look for Patterns



4. Formulate Leverage Points



Bottom Line





**Close the
feedback loop**

What Creates Systemic Change